

WHAT IS CLAIMED IS :

1. A light emitting display having an emissive element which emits light in response to a supplied current, the light emitting display comprising:

a drive current generating element for generating a drive current for allowing light to be emitted from the emissive element;

a data line onto which a voltage signal and a current signal corresponding to data regarding an amount of light emission from the emissive element are sequentially supplied; and

a voltage storage element connected to the data line and for sequentially storing a charge voltage based on the voltage signal and the current signal corresponding to data regarding the amount of light emission; wherein

the emissive element emits light based on a drive current generated by the drive current generating element based on the charge voltage stored in the voltage storage element and corresponding to the current signal.

2. A light emitting display according to Claim 1, wherein

the voltage storage element is charged based on the voltage signal supplied onto the data line, and

the drive current generating element generates the drive current based on the current signal which is supplied following the voltage signal and the voltage storage element is re-charged when the drive current is generated in the drive current generating element.

3. A light emitting display according to Claim 1, wherein

a switch circuit is provided for sequentially switching and supplying the voltage signal and the current signal corresponding to data regarding the amount of light emission onto the data line.

5 4. A light emitting display according to Claim 1, wherein  
the drive current generating element is a driver transistor  
for generating a drive current corresponding to a voltage supplied  
on its gate;

the voltage storage element is a storage capacitor element  
10 connected to the gate of the driver transistor for storing the gate  
voltage;

a drive current control transistor is provided between the  
driver transistor and the emissive element for controlling whether  
or not to supply the drive current from the driver transistor to  
15 the emissive element;

a first write control transistor is connected between the data  
line and a connection portion between the driver transistor and  
the drive current control transistor; and

20 a second write control transistor is connected between the  
data line and the gate of the driver transistor.

5. A method for driving a light emitting display according to Claim  
4, comprising:

switching on the second write control transistor during a  
25 period in which the voltage signal is supplied onto the data line  
to write the voltage signal into the storage capacitor element having  
one terminal connected to the gate of the driver transistor;

switching on the first write control transistor and the second  
write control transistor during a period in which the current signal

is supplied onto the data line to supply the drive current having a current value equal to that of the current signal to the driver transistor through the first write control transistor, and, at the same time, to write the gate voltage of the driver transistor when 5 the drive current is supplied into the storage capacitor element; and

switching off the first and second write control transistors and switching on the drive current control transistor to supply, through the drive current control transistor to the emissive element, 10 the drive current having a current value equal to that of the current signal written into the storage capacitor element.

6. A light emitting display according to Claim 4, wherein each of a plurality of pixels arranged in a matrix form has 15 such an emissive element;

each of a plurality of data lines is provided for pixels in each column of the matrix; and  
pixels of adjacent rows of the matrix are respectively connected to different data lines among the plurality of the data 20 lines.

7. A light emitting display according to Claim 6, wherein each of the plurality of pixels further comprises the driver transistor, the storage capacitor element, the first and second write control transistors, and the drive current control transistor; a selection line for voltage writing and a selection line for current writing are provided for each row of the matrix; a gate of the second write control transistor is connected to the selection line for voltage writing; and

a gate of the first write control transistor is connected to the selection line for current writing.

8. A light emitting display according to Claim 1, wherein

5 each of a plurality of pixels arranged in a matrix form has such an emissive element;

each of a plurality of data lines is provided for pixels in each column of the matrix; and

10 pixels of adjacent rows of the matrix are respectively connected to different data lines among the plurality of the data lines.

9. A light emitting display according to Claim 8, wherein

15 a selection line for voltage writing and a selection line for current writing are provided for each row of the matrix.

10. An electroluminescence display circuit comprising:

a driver transistor for generating a drive current corresponding to a voltage supplied on its gate;

20 an electroluminescence element which is driven by a drive current from the driver transistor;

a drive current control transistor connected between the driver transistor and the electroluminescence element for controlling whether or not to supply the drive current from the driver transistor 25 to the electroluminescence element;

a first write control transistor having a first region connected to a connection portion between the driver transistor and the drive current control transistor and a second region connected to the data line;

a second write control transistor having a first region connected to the data line and a second region connected to the gate of the driver transistor; and

a storage capacitor connected to the gate of the driver

5 transistor for storing the gate voltage, wherein

a data voltage signal and a data current signal corresponding to data regarding an amount of light emission are sequentially supplied onto the data line;

the second write control transistor is switched on during when

10 the drive current control transistor and the first write control transistor are switched off and a data voltage signal is supplied onto the data line, to write the data voltage signal into the storage capacitor;

the first write control transistor is switched on during when

15 a data current signal is supplied onto the data line so that the data current signal is supplied to the data line through the driver transistor and the first write control transistor, and, at the same time, a voltage corresponding to the data current signal is written into the storage capacitor via the second write control transistor;

20 and

the first and second write control transistors are switched off and the drive current control transistor is switched on so that a drive current corresponding to the voltage written into the storage capacitor is generated in the driver transistor and the drive current 25 is supplied to the electroluminescence element via the drive current control transistor and light is emitted.

11. An electroluminescence display having an electroluminescence element in each of a plurality of pixels arranged in a matrix form

for achieving a display by controlling light emission from each pixel, wherein

each of a plurality of data lines is provided corresponding to each column of the matrix and a different data line among the plurality of data lines is connected to corresponding pixels for each row of the matrix; and

display data is sequentially supplied from the plurality of data lines for pixels of each column of the matrix.

10 12. An electroluminescence display according to Claim 11, wherein both a data voltage signal and a data current signal regarding display data can be switched and supplied onto each of the plurality of data lines; and

15 the data voltage signal and data current signal regarding display data are sequentially supplied to each pixel so that the display of each pixel is controlled.

13. An electroluminescence display according to Claim 11, wherein two control lines are provided for each row of the matrix; 20 each of the pixels has a plurality of transistors controlled by the two control lines; and

the writing of data voltage signal and the writing of the data current signal into each of the pixels are controlled by the two control lines.